

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

15

REMARKS

Claims 1, 4-7, 9-19, and 21-37 are all the claims presently pending in the application.

Applicants gratefully acknowledge that **claims 1, 4-7, 9-17, 33, and 34** would be allowable if amended in accordance with the Examiner's suggestions, and the objections to the specification are overcome.

While Applicants believe that all of the claims are patentable over the cited references, to speed prosecution, allowable claims 1, 4-7, 9-16, 33, and 34 have been amended in accordance with the Examiner's suggestions for placing claims 1, 4-7, 9-17, 33, and 34 in condition for allowance.

Claims 26-32, 36, and 37 are withdrawn from consideration as being directed to non-elected species of the invention.

While Applicants believe that all of the claims are clear and definite, to speed prosecution, the claims have been amended to define more clearly the features of the claims invention, thereby overcoming the rejection under 35 U.S.C. § 112, second paragraph, set forth below.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1, 4-7, 9-17, 22, 25, 33, and 34 stand rejected under 35 U.S.C. § 112, second paragraph.

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

16

Claims 18, 19, 21-25, and 35 stand rejected under U.S.C. § 102(e) as being anticipated by Fong (U.S. Patent No. 6,279,015).

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention is directed to a method of reconciling component variables with container variables in a document.

In conventional document assembly systems, importation of document components is typically based on fixed criteria which presents problems for complex documents. For example, a particular clause may be reused throughout a document, and it may be integrated within a larger assembly of document components which is referred to as a “container” or “container assembly”. There must be links between the container assembly and the document component being imported during document assembly, and both items may contain variables which may refer to the same domain concepts (e.g., see specification at page 3, line 20 to page 4, line 5).

However, maintaining consistency between these variables once the document component (source component) has been imported presents problems unless these variables representing the same concepts are somehow linked to one another. Hitherto the present invention, such a solution has not been provided and hence these problems have been prevalent (e.g., see specification at page 4, lines 6-10).

Instead, with the conventional systems and methods, there are simply container variables and components (e.g., see specification at page 5, lines 9-10).

In conventional systems, the component (independent of its content) that structures the variables together is not independent of the value assignment. As a result, no manual linking of

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

17

these concepts is provided, and thus there is minimal (if any) flexibility and/or reusability of the components since the components are not generally applicable or generic (e.g., see specification at page 6, lines 1-5).

Further, there may be several different components in the document that all refer to the same concepts (e.g., the company's address is repeated in different places throughout the document). However, since in conventional systems the variables in the different components are not linked, if the company's address is changed in one location, it will not be updated elsewhere. This is a serious maintenance problem that would be fatal to a system that relies heavily on component-based drafting (e.g., see specification at page 6, lines 6-12).

In the claimed invention, on the other hand, there are three concepts which are considered, including the position in the document where the component goes, the component itself that plugs in and out of the position in the document, and the particular domain model information which plugs into the component. The novel and unobvious reconciler of the claimed invention allows a manual linking of these concepts, thereby allowing greater flexibility and greater reusability of the components because the components are more generally applicable (e.g., see specification at page 9, lines 11-18).

Thus, with the unique and unobvious features of the claimed invention, the user can reduce its database requirements, increase flexibility and reusability in that, for any given document component, the document component can be applied more generically to increase its reusability (e.g., more generically reusable). The user also can determine the linkages and leverage loose coupling of the domain knowledge and document knowledge. Further, the invention allows reconciliation to be performed interactively by the user (e.g., see specification at page 9, line 19, to page 10, line 3).

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

18

II. THE 35 U.S.C. §112 REJECTIONS

A. Claims 1, 4-7, 9-17, 22, 25, 33, and 34 stand rejected under 35 U.S.C. § 112, second paragraph.

Applicants appreciate the Examiner's helpful suggestions for amending the claims.

While Applicants believe that the claims would be clear and definite to the ordinarily skilled artisan, to speed prosecution, Applicants have amended the claims in accordance with the Examiner's suggestions.

Therefore, the Examiner respectfully is requested to withdraw this rejection of claims 1, 4-7, 9-17, 22, 25, 33, and 34.

Applicants note that, with respect to claims 22 and 25, the Examiner erroneously states that neither the specification nor the previous claims mentions "*swapping*" or "*built*", as recited in claims 22 and 25. However, contrary to the Examiner's position, these features and claim terms clearly are recited either in the "original" claims and/or in the specification (e.g., see original claims 22 and 25; see also specification at page 8, lines 12-13; page 9, lines 4-7), and thus, clearly are mentioned in the original disclosure.

As mentioned above, to speed prosecution, Applicants have amended claims 22 and 25 to overcome this rejection.

III. THE PRIOR ART REJECTION

Claims 18, 19, 21-25, and 35 stand rejected under U.S.C. § 102(e) as being anticipated by Fong (U.S. Patent No. 6,279,015). Applicants respectfully traverse this rejection, for at least the following reasons.

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

19

First, Applicant notes that the Examiner merely has cited all of the Figures (i.e., 1-20) and all of the disclosure (i.e., column 1, line 1 through column 44, line 19) of the Fong reference.

That is, for each of claims 18, 19, 21-25, and 35, the Examiner cites the entire Fong reference in support of his position (e.g., see Office Action at page 12, lines 16-17; page 13, lines 1-2, lines 6-7, lines 11-12, and 17-18; page 14, lines 3-4, line 10, lines 16-17, and lines 20-21; and page 15, line 6, line 13, and line 19; page 16, lines 9-10, and line 20, and page 17, line 1).

Thus, the Examiner, in effect, is asserting that the claimed invention is “clearly anticipated” by Fong. Applicants submit, however, that it is not apparent from reading the entire disclosure of Fong (i.e., Figures 1-20 and column 1-44) which portions of the Fong reference the Examiner has deemed to “anticipate” the respective elements of the claimed invention.

Applicants respectfully submit that, by citing the entire disclosure of Fong for each of the elements of claims 18, 19, 21-25, and 35, the Examiner clearly has failed to establish a *prima facie* case of anticipation with respect to these claims.

Hence, Applicants cannot properly respond to the Examiner’s position, since it is unclear what portions of Fong the Examiner believes anticipate each and every element of the claimed invention.

Thus, should the Examiner maintain this rejection, Applicants respectfully request that the Examiner properly identify which portions of Fong allegedly disclose or suggest each and every element of the claimed invention, as recited in claims 18, 19, 21-25, and 35.

In view of the foregoing, Applicants respectfully submit that the Examiner has not established a *prima facie* case of anticipation with respect to claims 18, 19, 21-25, and 35.

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

20

Applicants reserve the right to traverse this rejection at such time that the Examiner properly identifies the features of the Fong reference which are deemed to anticipate the claimed invention (i.e., at such time that a *prima facie* case of anticipation properly is established).

Second, notwithstanding the above, Applicants submit that Fong does not disclose or suggest all of the features of the claimed invention.

For example, independent claim 18 recites a computer-implemented method of interactively reconciling component variables with container variables in a document, including:

displaying a component variable next to a representation of an element in a domain model of the document;
identifying an association between the component variable and said element in the domain model; and
matching said element of said domain model interactively by a user (emphasis added).

On the other hand, independent claim 19 recites a system for reconciling component variables with container variables in a document relative to a domain model, including:

a container including a plurality of container variables;
a component including a plurality of component variables in said document; and
a reconciler that maps container variables in said container with component variables in said component,
wherein said reconciler is manually controlled by a user to perform a mapping (emphasis added).

Further, independent claim 35 recites a system for reconciling component variables with container variables in a document, including:

means for identifying a component variable;
means for determining if there is a container variable in a container that refers to a same domain concept as the identified component variable;

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

21

if a container variable is determined to refer to the same domain concept as the identified component variable, means for associating said component variable with said container variable;
if no container is determined to refer to the same domain concept as the identified component variable, means for associating said identified component variable with an element in a domain model of the document having a best identity match; and
means for displaying the association between said identified component variable and said container variable or said domain model element to a user,
wherein said user either accepts or overrides said association
(emphasis added).

Applicants submit that a “*domain model*” is a partially specified object model describing the concepts, their properties and relationships in the domain that a document is about. The values of properties may be references to other objects in the domain model.

On the other hand, the association or link expressions define a path in the domain model. This path ultimately lands at a domain model element.

For example, “The Company.CEO.Name” would define a path denoting the name of the CEO of “The Company”. The document model is also an object model, but different from the domain model, in that it describes the component parts of the document (e.g., the introduction, the customer information, the customers responsibilities, the deliverables, etc.).

A container variable holds a reference to a component in the document model. For example, the Customer Information Section might be a container variable. It is intended to hold a document component that describes the customer. On the other hand, an association or link expression allows a container variable to be mapped to a domain model element.

Applicants note that making the mapping according to the claimed invention generally is an easy process. A container variable, which denotes some part of the document model, is

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

22

associated with a link expression (which denotes some object in the domain model). This can be done programmatically or through a GUI.

The mapping may assert, for example, that the Customer Information Section of the document be associated with the "thecompany.ceo" domain model element. As such, the system can then choose to render the information in the domain model element in a document model element that is a valid filler for the Customer Information Section.

Applicants emphasize that, according to an exemplary aspect of the present invention, there are three distinct structures:

- 1) The Domain Model describing the domain independently of any particular document structure and independently of any written description or rendering;
- 2) The Document Model describing the structure of a particular document. Each part ultimately represented by a container variable; and
- 3) Document Components, which are written and formatted language (with content variables) that can fill the container variables representing parts of a document model.

Applicants submit that associations or link expressions allow the user to drill down and identify elements in the domain model and link them to container variables in the document model, thereby indicating what content should be used to instantiate a document component that would fill the container variable.

Thus, according to the claimed invention, it is easy to assert the mappings. Moreover, the mappings can be overridden.

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

23

As an example, in a case where the system may instantiate a customer description document component with the CEO's personal information and insert that in the Customer Information container variable, the user (or another system) may override this and, while keeping the customer description document component, instead link it to the company's founder (e.g., "thecompany.founder").

In view of the foregoing, Applicants submit that Fong clearly does not disclose or suggest all of the features of the claimed invention. Therefore, the Examiner is respectfully requested to reconsider and withdraw this rejection.

The Examiner respectfully is requested to reconsider and withdraw the rejection of these claims, or alternatively, properly establish a *prima facie* case of anticipation of claims 18, 19, 21-25, and 35.

IV. REQUEST FOR REJOINDER OF NON-ELECTED CLAIMS

Applicants respectfully request that the Examiner rejoin non-elected claims 26-32, 36, and 37, which were withdrawn from consideration as being directed to non-elected species of the invention, and permit these claims to pass to allowance for somewhat similar reasons as those set forth above.

V. FORMALITIES

A. Objections to Specification

The Office Action objects to the specification as allegedly failing to provide antecedent basis for some of the features of claims 1, 3, 22, and 25, since the specification allegedly fails to mention these terms and phrases.

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

24

Applicants reiterate that the features and claim terms which are identified by the Examiner clearly are recited either in the "original" claims and/or in the specification (e.g., see original claims 1, 3, 22, and 25; see also specification at page 8, lines 12-13; page 9, lines 4-7), and thus, clearly are part of the original disclosure. Thus, by definition, the original disclosure provides antecedent basis for these claim terms (e.g., see M.P.E.P. § 608.01(o)), since these claim terms were not added by amendments to the claims.

In the previous Amendment, Applicants incorporated the features recited in the original claims (i.e., which are part of the original disclosure) into the "Summary of the Invention" section of the specification.

While Applicants submit that the ordinarily skilled artisan would know and understand the ordinary meaning of these terms in the context of the specification, drawings, original claims, and the state of the art, to speed prosecution, Applicants have amended the specification and claims 22 and 25 to obviate this objection.

Thus, the Examiner is requested to reconsider and withdraw this objection.

The Examiner also objects to the specification at page 13, lines 12-14, and page 13, lines 20-22, and suggests amending these sentences to read more clearly. However, Applicants respectfully submit that it is not clear why the Examiner has deemed these sentences to be unclear, or why the Examiner proposes deleting portions of these sentences. Applicants submit that the subject sentences would be understandable to the ordinarily skilled artisan, as written.

However, to speed prosecution, the specification is amended merely to clarify these sentences (e.g., by setting off portions of the sentences using parentheses), somewhat in accordance with the Examiner's suggestion.

Thus, the Examiner is requested to reconsider and withdraw these objections.

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

25

B. Objections to Drawings

The Office Action also maintains the objection to claim 18, lines 3-4. Applicants reiterate that the claimed features are illustrated, for example, in Figures 3-5 of the present invention.

That is, with reference to Figures 3-5, the specification clearly discloses that users may interactively alter the mappings (e.g., as shown by the connector 14) provided by an automated algorithm to achieve a more precise linkage between source document component variables A, B, and C of 12 and the elements 1, 3, and 5 of the domain model of the container assembly 11.

The occurrences of variables A, B, and C within the text of the source component are now occurrences of variables 1, 3 and 5 of the container assembly 11. Thus, a linking (e.g., associating) has been performed by the connector 14, to increase the reusability and flexibility of the variables. Along these lines, as shown in Figure 5, when a component importation operation is initiated in an interactive reconciliation mode *"the system will produce mappings in connector 14 and output these to the user via a graphical user interface (GUI) 55"* (e.g., see specification at page 16, lines 14-17).

The specification clearly discloses that the user may then edit the mappings in connector 14 overriding the system generated mapping. Once editing of the system generated mapping is completed, component importation is continued using the edited mappings shown in connector 14.

Particularly, the specification discloses that, in one exemplary implementation (e.g., Figure 5, GUI 55), the identifying is performed interactively by the user by the system displaying component variables and their link expressions next to a representation of elements of the

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

26

domain model, as shown in Figure 5. The user then makes the linking (e.g., associations) by clicking on (actuating via input device) the appropriate variable(s) in the components and matching the variable(s) to an element of the containing document's domain model. Each variable in the component may be matched, but need not be depending upon the user's desires (e.g., see specification at page 16, lines 20-22, and page 17, lines 1-5).

Along these lines, the user can select either the imported component value or the containing document's variable as the value which is to be used. Thus, the variable(s) is/are allowed to attach to components. Hence, the user by using a graphic user interface (GUI) 55 of Figure 5, identifies the associations between the component variable and a domain model element (e.g., see specification at page 17, lines 6-10).

Clearly, one of ordinary skill in the art would know and understand that Figure 5 illustrates one possible GUI of the system displaying component variables (e.g., A, B, C) and their link expressions (e.g., A→1; B→3; C→5) next to a representation of elements (e.g., 1, 3, 5) of the domain model, as shown in Figure 5.

Applicants note that the arrow extending from the GUI 55 display screen to the document component 12, connector 14, and container assembly 11, exemplarily illustrate one possible display of these claimed elements on the display of the GUI 55, as would be understood by the ordinarily skilled artisan. Applicants note that displaying component variables (e.g., A, B, C) and their link expressions (e.g., A→1; B→3; C→5) next to a representation of elements (e.g., 1, 3, 5) of the domain model on the screen of a GUI clearly would be understandable to the ordinarily skilled artisan in view of the written disclosure of the same in the specification, and further in view of the exemplary embodiments illustrated by the GUI in Figure 5.

Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

27

For the foregoing reasons, the Examiner is requested to reconsider and withdraw the objection to the drawings.

C. Objections to Claims

The Examiner objects to claims 14 and 17. Applicants' respectfully submit that claims 14 and 17 have been amended to obviate these objections.

Accordingly, the Examiner is requested to reconsider and withdraw the objections to claims 14 and 17.

VI. CONCLUSION

In view of the foregoing, Applicant submits that claims 1, 4-7, 9-19, and 21-37, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

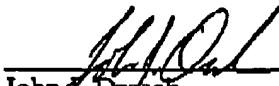
Serial No. 09/497,800
Docket No. YOR920000202US1
(YOR.094)

28

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,

Date: JANUARY 23, 2006



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CERTIFICATE OF TRANSMISSION

I certify that I transmitted via facsimile to (571) 273-8300 the enclosed Amendment under 37 C.F.R. § 1.111 to Examiner William D. Hutton, Jr., Art Unit 2176, on January 23, 2006.


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